

**Request to Archive  
With The National Centers for Environmental Information  
For AVHRR Aerosol Optical Thickness (AOT) Climate Data Record (CDR) Version 3  
Provided by NCEI**

**2016-06-14**

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

**1. Who is the primary point of contact for this request?**

Xuepeng Zhao  
NCDC  
Meteorologist  
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**2. Name the organization or group responsible for creating the dataset.**

Production Branch of NCEI/CWC/ODRB

**3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.**

AVHRR AOD CDR version 3 is derived over global oceans from PATMOS-x AVHRR level-2b channel 1 (0.63 micron) orbital clear-sky radiance. This AOD CDR extends from 1981 to 2016 and includes both daily and monthly data in an equal angle grid (0.1x0.1 degree). There are 3 CDR variables in the daily the monthly data.

**4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)**

From 1981-08-24 to 2016-03-31

**5. Edition or version number(s) of the dataset:**

version 3

**6. Approximate date when the dataset was or will be released to the public:**

2016-10-01

**7. Who are the expected users of the archived data? How will the archived data be used?**

Environmental and climate change community

**8. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?**

The data has been compared with other satellite observations and model simulations and the results have been summarized in the paper and submitted to peer reviewed journal

**9. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?**

This is the version 2 of AVHRR Aerosol Optical Depth (AOD) Climate Data Record (CDR). Version 1 has been archived before

**10. List the input datasets and ancillary information used to produce the data.**

Reflectance in 0.63 micron channel and the parameters of cloud probability and surface types in the PATMOS-x AVHRR level-2B product.

**11. List web pages and other links that provide information on the data.**

The metadata include:

- 1)Scaling information
- 2)Unit
- 3)Data range (minimum, maximum)
- 4)Filling value
- 5)Dimension information

**12. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.**

1. CATBD, Algorithm Flowchart, CDR Maturity Matrix, Source Code with the Header following the CDR Requirements.

**13. Indicate the data file format(s).**

1. netCDF-4

**14. Are the data files compressed?**

No

**15. Provide details on how the files are named and how they are organized (e.g., file\_name\_pattern\_YYYYMM.tar in monthly aggregations).**

Daily Averaged Data File:

file\_name\_pattern\_YYYY\_DDD\_version.nc (e.g., AVHRR\_aot\_dave\_1982\_365\_v2.nc)

Monthly Averaged Data File:

file\_name\_pattern\_YYYY\_MMM\_version.nc (e.g., AVHRR\_aot\_mave\_2009\_12\_v2.nc)

**16. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?**

The information is provided in the aerosol CDR data document.

**17. What is the total data volume to be submitted?**

**Historic Data: all historic data or data submitted as a completed collection.**

Total Data Volume: 265GB

Number of Data Files: 11550

**18. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.**

This version 2 is produced from PATMOS-x AVHRR level-2B clear-sky radiance with better cloud screening compared to the previous version 1 produced from AVHRR level-1B radiance. The spatial resolution is different but the aerosol retrieval algorithm is the same.

**19. Describe the server that will connect to the ingest server at NCEI for submitting the data.**

Physical Location: Asheville, NC, USA  
System Name: NCDC RSAD Linux Server  
System Owner: NCDC  
Additional Information:

**20. What are the possible methods for submitting the data to NCEI? Select all that apply.**

1. FTP PUSH  
SCP

**21. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.**

1. User interface to order and stage data for download  
2. Direct download links  
3. Advanced web services (e.g., THREDDS Catalog Service)

**22. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?**

No known constraints apply to the data.

**23. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.**

This version 2 has been improved in cloud screening and data processing compared to version 1. It will be used for model climate model evaluation and air pollution and climate assessment. This historical data may be lost if it is not archived after the PI retired.

**24. Are the data archived at another facility or are there plans to do so? Please explain.**

No

**25. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?**

CDR program required to archive this CDR product

**26. Do you have a data management plan for your data?**

No

**27. Have funds been allocated to archive the data at NCEI?**

CDR Program should support archiving this product

**28. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.**

CDR Project

**29. Is there a desired deadline for NCEI to archive and provide access to the data?**

Archive by: 2016-09-31

Accessible by:

**30. Add any other pertinent information for this request.**

None

